

Northeast Region Bycatch Implementation Plan Action Items (FY06 and FY07) and Accomplishments (FY05 and FY06)

| Action | Status/Specific Accomplishments as of 9/30/05 | 2006 | 2007 | How Progress Will Be Measured and/or Monitored | Milestone |
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| MONITORING | | | | | |
| Explore the use of video monitoring systems | 1) Phase I of a pilot study to document finfish bycatch in longline fishery was completed (see http://www.cchfa.org/pages/2/27/ for report). 2) Utilized video on scallop dredges to document turtle behavior - attained over 80 hours of quality video footage. | 1) Phase 2 of longline study (starting in January 2006) will beta test a video monitoring system on 10 vessels for entire fishing season to document finfish bycatch. 2) Developing low cost video camera systems to be used on commercial trawl vessels to document cetacean and sea turtle behavior. A minimum of 50 video trips are planned. | Conduct data analyses of projects started in 2006. | Collect and inventory video tapes. | Report summarizing study results completed. |
| Improve training and retention of at-sea observers | New training center was created in Falmouth, MA. Sea turtle training improved in recent years. For example in 2001, ~80% of sea turtles observed in scallop dredge fishery were of an unknown species. In 2004 and so far in 2005, all turtles have been identified to species. | Provide high quality training to observers to prepare them for the mission | Provide high quality training to observers to prepare them for the mission | Measure reduction in attrition of observers. Monitor improved species identification and quality of recorded data. | Have less than 5% attrition per month. |
| Provide vessel owners with observer data | All Captains received data release forms for them to receive their own data. | All Captains will receive data release forms for them to receive their own data. | All Captains will receive data release forms for them to | By providing data to all received requests. | Provide data to requesting individuals |
| Conduct database review to identify additional existing data sources | This review was part of the groundfish SBRM document. | This review will become part of the omnibus SBRM document. | This review will become part of the omnibus SBRM document. | Describe each available data source used to monitoring catch or bycatch. | Completed SBRM Report which contains details on catch and bycatch data sources. |
| Improve quantitative estimates of bycatch by gear and fishery | 1) Developed an algorithm to optimize sea day coverage to reduce variance of discard estimators; 2) Sea turtle bycatch was estimated for the 2003 and 2004 sea scallop dredge fishery in the MidAtlantic region. 3) Bycatch of some marine mammals in bottom and mid-water trawl fisheries were estimated. 4) Continued to estimate annual marine mammal and seal bycatch estimates from gillnet fisheries. | 1) Continue to use algorithm to provide guidance for sea day coverage; 2) Estimate sea turtle, marine mammal, and seal bycatch using observed fisheries data; 3) Continue to develop methodology to estimate bycatch of sea turtles, marine mammals and seals. | 1) Continue to use algorithm to provide guidance for sea day coverage; 2) Continue to estimate sea turtle, marine mammal, and seal bycatch using observed fisheries data; 3) Continue to improve bycatch estimation methods, as needed. | 1) Provide sea day schedules to NEFSC staff to monitor coverage of fisheries; 2) Provide estimates of precision when reporting discard estimates, when appropriate; 3) Provide annual sea turtle, marine mammal, and seal bycatch estimates including a measure of variability. | 1) Complete data analyses; 2) Update sea day schedule as needed; 3) Update Marine Mammal Stock Assessments with bycatch estimates, as needed. |
| Increase observer coverage to address regional priorities | 1) Maximized observer coverage through joint allocation that came from various funds for various target species; 2) Increased observer coverage to monitor TAC for US/Canadian resources; 3) Utilized optimization algorithm to assign sea day coverage; 4) Started to observe coastal Virginia fisheries (primarily gillnet) during period of peak sea turtle stranding; 5) Increased observer coverage of sea scallop trawl fisheries to monitor turtle bycatch; 6) Increased observer coverage in bottom and mid-water trawls and purse seine fisheries to observe all types of bycatch and discards. | 1) Continue to use algorithm and/or other tools to provide guidance for sea day coverage; 2) Optimize coverage based on funding levels; 3) Continue to request number of sea days needed to achieve at most a 20-30% CV for each bycaught species/fishery combination; 4) Improve achieved percentage of requested sea-days. | 1) Continue to use algorithm or other tools to provide guidance for sea day coverage; 2) Optimize coverage based on funding levels; 3) Continue to request number of sea days needed to achieve at most a 20-30% CV for each species/fishery combination. | 1) Reports of achieved sea days; 2) CV on reported bycatch estimates. | 1) Quarterly reports of achieved sea days; 2) Bycatch reports for sea scallop fisheries; 3) Summary memo for Coastal Virginia observer coverage; 4) Annual Marine Mammal Stock Assessments updated with observer coverage. |
| Incorporate review of quantitative estimates of bycatch into SAW process | Standardized SAW/SARC Terms of Reference include "Characterize the commercial and recreational catch including landings and discards". | Continue to use Standardized SAW/SARC Terms of Reference as appropriate. | Continue to use Standardized SAW/SARC Terms of Reference as appropriate. | SAW/SARC Working Groups review stock assessment input data, including discard estimation analyses | SAW/SARC documents |
| Pay for sea days to supplement existing data (if funded) | This approach has not been applied to supplement existing bycatch (or discard) data. | None. | None. | None. | None. |

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| Gear modifications to reduce bycatch in regional priority fisheries. | Funded projects include gear modification studies to reduce bycatch in pound nets, scallop chain mat, scallop dredge modifications, and on trawls; Details include: 1) Pound net - completed study that successfully reduced the bycatch of sea turtles in the experiment; 2) Successfully pilot-tested, with NMFS Pascagoula, a modified scallop dredge (designed to mitigate the concern of turtles going under the cutting bar) by video taping carcass and model turtles which were placed in front of the fishing dredge; 3) A collaborative study with industry determined that a modified sea scallop dredge design effectively caught sea scallops at rates similar to standard dredges, however, since no interactions with turtles were observed, more work is still needed to fully evaluate this design; 4) Tested a soft panel to mitigate the bycatch of sea turtles and cetaceans in the Mackerel fishery. | On Dec 8-9, 2005 a workshop to discuss gear modifications to reduce cetacean and sea turtle bycatch in trawl fisheries will include industry and gear specialists. New projects include: 1) Develop gear modification for the Herring Mid-water trawl fishery to minimize haddock bycatch; 2) Assess the escape vent selectivity, bycatch and discard survivability in the Northeast fishery for deep water red crab; 3) Design and test a topless shrimp trawl to reduce finfish bycatch in the pink shrimp fishery; 4) Evaluate hook size and shape on the catch of sublegal cod and haddock in the recreational fishery; 5) Test novel gear designs for reducing catch of skate in groundfish fisheries; 6) Fabricate Bait Study; and 7) Discard mortality of sublegal cod. | Continue some of the past gear modification research (if funded), and perhaps fund new projects. | Reports from projects will be reviewed. | Reports from bycatch reduction projects. |
| Study of animal behavior as it relates to development of gear to reduce bycatch in regional priority fisheries | A contract to investigate loggerhead turtle behavior around scallop dredges in mid-Atlantic waters was awarded and the project conducted. Unfortunately, no turtles were seen. | 1) Seeking funding opportunities to collect depth tracking data of loggerheads in stratified mid-Atlantic waters data; 2) Continuing investigation into the behavior of loggerhead turtles around sea scallop dredges; 3) Developing low cost video camera systems to be used on commercial trawl vessels to document cetacean and sea turtle behavior. A minimum of 50 video trips are planned. | Projects will be ongoing if funds acquired. | Reports from projects will be reviewed. | Reports from bycatch reduction projects. |
| Improve habitat and ecosystem information relevant to bycatch | 1) Using observer data, simultaneously produced bycatch estimates for marine mammals and sea turtles in Atlantic dredge and trawl fisheries and investigated relationships between bycatch and basic habitat characteristics (e.g., depth, bottom slope, surface temperature); 2) Included marine mammal, turtle, and seal bycatch and fish discards in an ecosystem analysis (EMAX project). | 1) Continue projects started in 2005. 2) Present habitat and trawl bycatch analyses to the upcoming Trawl Take Reduction Team. | Continue this work, if appropriate. | Reports from EMAX and from habitat/bycatch investigations. | Reports from EMAX and from habitat/bycatch investigations. |
| Establish centralized data repository | 1) Data generated by the observer program, cooperative research programs, and NEFSC research cruises were entered into a centralized, standardized ORACLE database. 2) Gear Engineering Website established a searchable Access database of funded research projects related to gear design. | 1) Historical and recent tag and recapture data will be incorporated into the centralized ORACLE database. 2) Continue to update Gear Engineering Website database. | Continue incorporating data into the centralized ORACLE database and Gear Engineering Website database. | Monitor the type and quantity of data going into the databases. | Summary reports of databases contents. |
| Establish long-term research funding program; streamline exempted fishery permit process | Each year, the CRPP solicits, selects, and funds several research projects that support the objectives and priorities of the NEFMC, including gear modifications to reduce bycatch. In 2005, nine projects were selected for funding; of these, four were directly related to bycatch. In addition, the RO continued to refine its EFP program to streamline the process to obtain an EFP to the extent possible. | Select CRPP projects. | Select CRPP projects. | Successfully solicit, select, and fund research projects that support the objectives of the NEFMC, including gear modifications to reduce bycatch. | CRPP projects selected for coming fishing year. |
| Utilize data provided by the fishing sector | 1) Utilized landings provided by Dealers and Processors for fish assessments, marine mammal/sea turtle bycatch assessments, and management analyses; 2) Utilized landings, effort, and area fished from Vessel Trip Reports for fish assessments, marine mammal/sea turtle bycatch assessments, and management analyses; 3) Utilized data from CRPP studies (e.g. Study Fleet, Industry Based-Surveys and Cooperative Research projects) as appropriate for fish assessments and management analyses. | Continue to utilize Dealer, VTR, Observer, and CRPP data, as appropriate, in stock assessment and management analyses. | Continue to utilize Dealer, VTR, Observer, and CRPP data, as appropriate, in stock assessment and management analyses. | Documentation of complete SAW/SARC documents, sea turtle recovery reports, and Marine Mammal Stock Assessment documents. | Reports summarizing results. |

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| Participate in URI Sea Grant project to establish a regional gear engineering working group | Working group previously held two meetings: March 22-24, 2004 and Dec 8-9 2004. | Plan to meet again in spring of 2006. | May meet again. | Amount of shared information and equipment between gear researchers. | None. |
| MANAGEMENT | | | | | |
| Improve data available to the management process so that it can effectively address bycatch | 1) Used VMS to report daily catch (kept and discard) in US and Canada; 2) Used PDA devices to increase data capture time. | Increase use of PDAs for OBSCON data | Possible expansion of data collection to electronic devices pending 2006 experience | Evaluate error rate in digital data versus phoned in data | 20% reduction in error rate in OBSCON reporting |
| Consider management alternatives that provide incentive to reduce bycatch within planned management actions | 1) Provided support to Councils and Commission in discussions related to fish bycatch reduction, for example: a) In 2005, staffed the NEFMC's Ad-hoc Bycatch Committee in the development of alternatives to control the bycatch of haddock in the herring fishery, while still allowing the herring fishery to continue, e.g. alternative of total bycatch cap instead of trip cap; b) Groundfish Plan Development Teams (PDT) investigated several alternatives including B-days and Special Access Programs; c) other PDT (groundfish, scallop, herring, dogfish, monkfish, skate, etc) conducted/reviewed data analyses to support management alternatives such as haddock separator panels, mesh sizes, scallop dredge chain mats, access to closed areas, B-days, bycatch caps, dogfish mortality and trip caps. 2) Provided support to existing Atlantic Marine Mammal Take Reduction Teams (TRT) (Large Whale, Harbor Porpoise, and Coastal Bottlenose dolphins) by conducting data analyses that investigated a variety of management alternatives to reduce bycatch of marine mammals. | 1) Continue to support Plan Development Teams in their work with Councils and Commission; 2) Support the upcoming Marine Mammal Trawl Take Reduction team by developing and analyzing management alternatives, including providing incentives; 3) Continue to support the existing Marine Mammal Take Reduction Teams. | 1) Continue to support Plan Development Teams in their work with Councils and Commission; 2) Continue to support Marine Mammal Take Reduction Teams. | Documentation of PDT and TRT meetings. Management actions related to bycatch will include consideration of management alternatives designed to provide incentives to reduce bycatch. | For Take Reduction Teams, develop ways to reduce marine mammal bycatch to PBR (or ZMRG) within time lines set out by the Marine Mammal Protection Act (MMPA). |
| Evaluate the relation of excess fishing capacity to bycatch | Provided support to Councils to evaluate the relationship between excess fishing capacity and bycatch. | Continue to provide support to Councils to evaluate the relationship between excess fishing capacity and bycatch. | Continue to provide support to Councils to evaluate the relationship between excess fishing capacity and bycatch. | Council actions related to either bycatch or capacity will address the relationship between excess fishing capacity and bycatch. | None. |
| Establish Council bycatch committees | Supported and staffed bycatch committees established by the Councils. In 2005, NEFMC established ad-hoc Bycatch Committee to address short-term issues (haddock bycatch in herring fishery). | Continue to support and staff bycatch committees established by the Councils. | Continue to support and staff bycatch committees established by the Councils. | Council bycatch committees will be supported and staffed by appropriate staff. | None. |
| Include individuals on Council working groups (PDTs etc.) with gear expertise | Supported Council initiatives to include individuals with gear expertise on relevant working groups. | Continue to support Council initiatives to include individuals with gear expertise on relevant working groups. | Continue to support Council initiatives to include individuals with gear expertise on relevant working groups. | Relevant Council working groups will include individuals with gear expertise. | None. |
| Establish a peer review process for gear research proposals and results | Supported efforts by the Councils to establish a peer review process for gear research proposals and results. In 2005, the RO attended and worked with both Councils' research steering committees to address issues related to peer review of research proposals and results. | Continue to support efforts by the Councils to establish a peer review process for gear research proposals and results. | Continue to support efforts by the Councils to establish a peer review process for gear research proposals and results. | The Councils establish peer review procedures for gear research proposals and results. | None. |
| Evaluate possibility of using daily vessel reports to identify bycatch hotspots | Implemented requirements for daily reporting of yellowtail flounder catch in multispecies and scallop access program fisheries. | Continue and expand use, as appropriate, of daily VMS reporting in certain fisheries. | Continue and expand use, as appropriate, of daily VMS reporting in certain fisheries. | Daily VMS reporting used to successfully monitor and manage bycatch TACs. | None. |

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| Work with Councils and Commission to address bycatch in planned management actions, implementing bycatch management measures when appropriate, including measures that utilize results of recent or ongoing research | Provided support and advice to Councils and Commission in their efforts to address bycatch in planned management actions; for example: Plan Development Teams (groundfish, scallop, herring, dogfish, monkfish, skate, etc) conducted/reviewed data analyses to support management measures such as haddock separator panels, mesh sizes, scallop dredge chain mats, access to closed areas, B-days, bycatch caps, and dogfish mortality. | Continue to provide support and advice to Councils and Commission in their efforts to address bycatch in planned management actions. | Continue to provide support and advice to Councils and Commissions in their efforts to address bycatch in planned management actions. | Documentation of PDT meetings. Planned management actions will, where appropriate, address bycatch. | None. |
| EDUCATION/OUTREACH | | | | | |
| Improve NEFSC communication with constituents concerning Observer Program | Attended various Fisheries Forums, industry festivals, fisheries management meetings, etc | 1)Will attend Fisheries Forums, industry festivals, fisheries management meetings, etc; 2)Will provide comment cards to every vessel. | Will attend Fisheries Forums, industry festivals, fisheries management meetings, etc | 1) The number of outreach for attended; 2) Comment card cleared for use. | 1) Attend six or more outreach meetings per year;2) Comment cards received and program monitoring improved. |
| Improve NERO communication with constituents concerning use of bycatch estimates in management | 1) Constituent databases created for distribution of information; 2) Articles written for quarterly newsletters and external publications; 3) Email advisories distributed to media; 4) Web-based products developed; 5) Outreach workshop held for port agents. | 1) Continue to maintain and use constituent databases; 2) Continue expansion of outreach program and activities; 3) Conduct communications training for port agents. | 1) Continue to maintain and use constituent databases; 2) Continue expansion of outreach program and activities. | Completion of outreach performance measures. | 1) Outreach workshop for port agents; 2) Finalize outreach databases |
| Establish positions of Bycatch Outreach Specialist and Bycatch Gear Specialist (NERO) to work with regional partners and constituents on bycatch issues, including working directly with other gear researchers on technical solutions (if funded) | Not completed--positions never funded. | None. | None. | None. | None. |
| Establish Annual Bycatch forum to allow members of the gear engineering working group, other researchers, industry members and constituents to share information about recent bycatch research and identify potential avenues for future activities (if funded) | Two-day workshop is planned for week of Jan 23, 2006, in Portsmouth, NH. | Workshop to be held in Jan 06. Final report/guidebook for industry to be developed as outcome of workshop. | None. | Successful completion of workshop and development of guidebook for fishermen on how to develop and prepare bycatch-related research proposals.. | Completion of workshop; publication of guidebook. |

| Milestone Completion Date |
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| December 2007. |
| Annual |
| Annual |
| Aug 05 (Groundfish) Dec 06 (Omnibus) |
| Annual |
| Annual, though generally within a year of when bycatch data becomes available from the Observer Program. |
| as SAW/SARCs are scheduled |
| None. |
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| Dates per the contract specifications. |
| Dates per the contract specifications. |
| Trawl TRT planned to convene in September 2006. |
| Annual. |
| Projects selected by September of each year. |
| As SAW/SARC and marine mammal Take Reduction Team meetings are scheduled. Annually for Marine Mammal Stock Assessment updates. |

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| None. |
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| Jan-07 |
| For Take Reduction Teams, develop ways to reduce marine mammal bycatch within time lines set out by the Marine Mammal Protection Act (MMPA). |
| None. |
| None. |
| None. |
| None. |
| None. |

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| None. |
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| Annual. |
| Oct 04 (databases) Jul 05 (workshop) |
| None. |
| Jan 06 (Workshop) Sep 06 (Guidebook) |